

Amendments to the Specification:

Please add the following new Abstract to the present specification:

The invention provides cells and methods for identifying modulators of signal transduction, based on transducisome proteins that coordinate and assemble many types of signal transduction proteins. A transducisome is a PDZ domain containing protein that binds at least one signal transduction protein or a PDZ domain containing protein with at least one signal transduction protein bound. Examples of transducisome proteins include INAD, GRIP and other recently identified multi-PDZ domain proteins. Examples of signal transduction proteins include GPCRs, tyrosine kinase receptors, tyrosine phosphatase receptors, ion channels, phospholipases, adenylate cyclases, kinases and G-proteins. Also provided are methods for identifying modulators of signal transduction, proteins (and polynucleotides encoding the same) corresponding to transducisomes, modified transducisomes or defective transducisomes to use in assays of signal transduction, and a screening assay system for detecting protein-protein interactions.